



# **CAPITAL PLANNING INITIATIVE**

**2002-03**

**August, 2003**



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## EXECUTIVE SUMMARY

### BACKGROUND

The Government's 2002-05 Business Plan included the following goal:

*Goal 11 'Alberta will have effective and efficient infrastructure.'*

One of the strategies for achieving this goal is:

*'Implement initiatives to ensure effective and innovative capital planning and funding of government supported infrastructure through the government-wide capital planning initiative.'*

The Capital Planning Initiative (CPI) for 2002-03 shows continued progress in developing infrastructure management systems and reporting that supports effective decision-making for funding infrastructure.

The Financial Management Commission reported in July 2002. Implementation of their recommendations respecting capital financing and budgeting are important to the CPI.

## STRATEGIES AND TARGETS

The following strategies and targets were approved for 2002-03 by the CPI Deputy Ministers Committee to address the government's infrastructure goals.

| Strategy                                                                                                                                                                 | Target/<br>Performance Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 Support funding decisions with a long-term capital plan and common key performance measures for both government-owned and supported infrastructure.                    | <p>(a) Submit a Corporate Capital Overview (CCO) to Treasury Board by August 30, 2002. The CCO process should include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A five-year plan for each category of infrastructure.</li> <li><input type="checkbox"/> Justification for the five year plan.</li> <li><input type="checkbox"/> Identification of annual program and facility associated operating costs for any new capital spending.</li> <li><input type="checkbox"/> Prioritization of projects.</li> </ul> <p>(b) Liaise with the Project Prioritization Task Group on the integration and prioritization of projects across project types.</p> <p>(c) Review the CCO in light of the government response to the Financial Management Commission (FMC) recommendations.</p> | <p>(a) The CCO was presented to a Caucus retreat.</p> <p>(b) In response to the FMC recommendations, government is announcing changes to the capital budgeting process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2 Implement effective, independently verifiable infrastructure management systems (IMS) to improve planning and priority setting for owned and supported infrastructure. | <p>(a) Report by March 31, 2003 on progress towards implementation of effective, independently verifiable IMS for owned infrastructure.</p> <p>(b) Continue to refine and report on performance measures for physical condition, utilization, and functional adequacy of owned and supported infrastructure.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>(a) The BLIMS Inventory Module was 100% complete as of October 2002. The Evaluation Module was 75% complete by March 31, 2003. The BLIMS Leasing Module was 50% completed as of March 31, 2003 and the BLIMS Project Module was 25% completed as of March 2003.</p> <p>(b) MIMS is 90% complete as of March 31, 2003 and is implemented or being implemented in 35 municipalities and by 15 engineering firms.</p> <p>(c) EIMS development status is:</p> <ul style="list-style-type: none"> <li>• Data Repository 85% complete</li> <li>• Performance Measures 90% complete</li> <li>• Prediction/Optimization Modules 10% complete</li> <li>• Executive Reporting Capability 10% complete</li> </ul> <p>Expected that EIMS will be complete and operational by March, 2005.</p> <p>(d) TIMS as a comprehensive system is 40% complete as of March, 2003.</p> |

|                                                                                       |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3. Develop and assess priority-ranking system for government capital projects.</p> | <p>(a) Working with several ministries and the CCO Task Group, develop and assess a system for establishing priorities for proposed major capital projects across infrastructure types by August 31, 2002.</p> <p>(b) Provide a recommendation on the feasibility and scope of application of the proposed system, by March 31, 2003.</p> | <p>(a) A system for establishing priorities across infrastructure types was refined and tested.</p>                                                                                                                                                                                                                                                                                                 |
| <p>4. Ensure effective, innovative delivery of physical infrastructure.</p>           | <p>Specific targets for 2002-03 were:</p> <p>(a) Review impact on P3 guidelines of the government response to the Financial Management Commission.</p> <p>(b) Present P3 guidelines for approval to Deputy Minister's Committee by December 31, 2002.</p> <p>(c) Report on ASD initiatives undertaken in 2002-03.</p>                     | <p>(a) P3 Guidelines are in-line with FMC recommendations.</p> <p>(b) P3 Guidelines were further refined.</p> <p>(c) Extensive work was undertaken to develop several health facility P3 long-term care projects in Calgary Health Region, Capital Health, Westview, and David Thompson Health Region. RFI's, RFQs, &amp; RFPs were done in support of the proposed P3 Calgary Courts Facility.</p> |

## NEXT STEPS

The following initiatives will be continued in 2003-2004:

- Provide capital planning information to Treasury Board, supported by a prioritization of capital projects and Alternative Capital Financing opportunities.
- Continue to refine performance measures for physical condition, utilization, and functional adequacy of owned and supported infrastructure.
- Continue development of effective independently verifiable IMS for owned and supported infrastructure.
- Develop templates to support the business processes for alternative financing and delivery of capital projects.
- Develop alternative capital financing guidelines.

## CONCLUSION

The recommendations of the Financial Management Commission addressed a number of the concerns regarding capital budgeting. Implementation of those recommendations will build on much of the work that has been done over the past four years by the CPI, including:

- establishing common performance measures and collecting data to report on those measures,
- establishing common infrastructure management systems,
- developing guidelines for approval and execution of P3 projects,
- establishing a methodology for evaluating and prioritizing projects across different infrastructure types.

## Attachments

1. Performance Data – Owned and Supported Infrastructure
2. CPI Team Members

Attachment 1  
Performance Data -  
OWNED INFRASTRUCTURE 2002-03 <sup>1</sup>

| Category of Infrastructure                     | Notes    | Replacement Value (\$ Million) | % of Total Infrastructure | Physical Condition    | Utilization                          | Functional Adequacy            |
|------------------------------------------------|----------|--------------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|
|                                                |          |                                |                           | % Rated as Acceptable | % Utilization within Target Capacity | % Providing Acceptable Service |
| Buildings                                      | 2,3,4    | 5,518                          | 17%                       | 97%                   | 92%                                  | 87%                            |
| Transportation                                 | 5,6      | 19,600                         | 61%                       | 88%                   | 99%                                  | 81%                            |
| Water Management                               |          | 4,300                          | 13%                       | 96%                   | N/A                                  | 99%                            |
| <b>Aggregated Owned Infrastructure 2002-03</b> | <b>7</b> | <b>29,418</b>                  | <b>92%</b>                | <b>91%</b>            | <b>98%</b>                           | <b>85%</b>                     |
| <b>Aggregated Owned Infrastructure 2001-02</b> |          | <b>31,071</b>                  | <b>96%</b>                | <b>96%</b>            | <b>98%</b>                           | <b>85%</b>                     |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. The percentage of buildings rated as 'in acceptable physical condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life.
3. Replacement value of government buildings is based on an average cost of \$1650 /m2.
4. Replacement values for heritage buildings were reassessed and devalued from 2001-02.
5. Replacement value is under review.
6. A change in methodology for assessing physical condition for roads results in a lower rating from 2001-02.
7. Data is not available for parks infrastructure, lands and forests buildings, other roads and infrastructure, exhibits, interpretive infrastructure and bridges.

Performance Data -  
SUPPORTED INFRASTRUCTURE  
2002-03 <sup>1</sup>

| Category of Infrastructure                         | Notes    | Replacement Value (\$ Million) | % of Total Infrastructure | Physical Condition    | Utilization                          | Functional Adequacy            |
|----------------------------------------------------|----------|--------------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|
|                                                    |          |                                |                           | % Rated as Acceptable | % Utilization within Target Capacity | % Providing Acceptable Service |
| Buildings                                          | 2        | 20,650                         | N/A                       | 92%                   | N/A                                  | N/A                            |
| Water Management (Irrigation)                      |          | 2,000                          | N/A                       | N/A                   | 92%                                  | N/A                            |
| <b>Aggregated Supported Infrastructure 2002-03</b> | <b>3</b> | <b>22,650</b>                  | <b>N/A</b>                | <b>N/A</b>            | <b>N/A</b>                           | <b>N/A</b>                     |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. Includes health facilities, schools, and post-secondary institutions.
3. Replacement value for municipal infrastructure, social housing and designated historic sites is not included. Municipal infrastructure is a significant portion of supported infrastructure.

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Attachment 2

**CAPITAL PLANNING INITIATIVE – TEAM MEMBERS**

**MLA Committee**

Tony Vandermeer, MLA, Chair  
Janis Tarchuk, MLA  
Gordon Graydon, MLA

**Deputy Ministers**

Jay Ramotar, Deputy Minister, Transportation - Chair  
Peter Kruselnicki, Deputy Minister, Finance  
Eric McGhan, Deputy Minister, Infrastructure

**Working Committee**

**Transportation**

Brian Marcotte, Chair  
Dan McCosh  
Rob Penny  
Don Tworowski  
Alec Waters  
Winnie Yiu-Yeung

**Infrastructure**

John Bennett  
Diane Dalglish  
Bob Smith  
Malcolm Johnson  
Debra Strutt  
Fred Trotter  
Don Tworowski

**Agriculture, Food and Rural Development**

John Tackaberry

**Community Development**

Darlene Andruchuk  
Rai Batra

**Seniors**

Robin Wigston

**Economic Development**

Duane Pyear  
Terry Duffy

**Environment**

Denis Magowan  
Bob Sharp

**Finance**

Stewart Boyd  
Adrian Jones

**Alberta Corporate Service Centre**

Cathryn Landreth

**Alberta Health and Wellness**

Bob Thomas

**Innovation and Science**

Blake Bartlett

Ray Bassett

**Learning**

Kent Jenkins

Steve MacDonald

**Municipal Affairs**

Brian Quickfall

Janice Romanyshyn

**Sustainable Resource Development**

Anne McInerney

**Working Committee Alternates and Task Group Members**

**Transportation**

Alan Kwan

Neil McQuay

Jane Stoeck

Vince Wu

Alan Humphries

**Infrastructure**

Terry Bociurkiw

Barry Day

Hilary Rose

Alwyn Thompson

**Community Development**

Larry Pearson

Dale Schinkel

**Seniors**

Clarence Bereska

**Government Services**

Laura Cameron

**Innovation and Science**

Dennis Badham

**Health & Wellness**

Bill Cruikshank

**Learning**

Rob Lee

**Municipal Affairs**

Stan Hayter

Chris Parkins

**STRATEGY 1**

**FUNDING**

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## **STRATEGY 1 – Funding**

### **1.1 Purpose**

Following is the strategy for 2002-03:

*Support funding decisions with a long-term capital plan and common key performance measures for both government-owned and supported infrastructure.*

#### **Targets to achieve these strategies are as follows:**

- (a) Submit a Corporate Capital Overview (CCO) to Treasury Board by August 30, 2002. The CCO process should include:
  - ☐ A five-year plan for each category of infrastructure.
  - ☐ Justification for the five year plan.
  - ☐ Identification of annual program and facility associated operating costs for any new capital spending.
  - ☐ Prioritization of projects.
- (b) Liaise with the Project Prioritization Task Group on the integration and prioritization of projects across project types.
- (c) Review the CCO in light of the government response to the Financial Management Commission (FMC) recommendations.

### **Results**

- (a) The CCO was presented to a Caucus retreat.
- (b) Prioritized projects were considered in determining the budget allocations for 2003-06.
- (c) In response to the FMC recommendations, government announced the following changes to the capital budgeting process:
  - ☐ A new three-year Capital Plan will provide sustainable and predictable funding for roads, schools, health facilities and other infrastructure priorities. To help ensure that Capital Plan commitments are met, any unspent funding

for government-owned projects can now be carried forward to the next fiscal year.

- Changes to the reporting of capital whereby government-owned capital assets will be
  - added to the government's balance sheet, and
  - charged to the government's bottom line over their useful life through amortization expense, rather than being charged to the bottom line when they are constructed or purchased.
- P3 projects will be encouraged where there is a business case to support them. Changes to the reporting of capital will help to encourage alternate financing arrangements.

## **STRATEGY 2**

# **INFRASTRUCTURE MANAGEMENT SYSTEMS (IMS)**

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## STRATEGY 2 – INFRASTRUCTURE MANAGEMENT SYSTEMS (IMS)

### 2.1 Purpose

The overall goal of the Capital Planning Initiative is to **'Implement initiatives to ensure effective, innovative capital planning and funding decisions.'**

A key initiative in achieving the goal has been to develop infrastructure management systems (IMS) that will provide reliable information to support capital planning decisions. Significant work has been done over the past two years to develop IMS for the various types of owned and supported infrastructure.

The following are the specific targets for 2002-03:

*Report by March 31, 2003 on progress towards implementation of effective, independently verifiable IMS for owned infrastructure.*

### 2.2 Status of Infrastructure Management System

#### 2.2.1 Buildings and Land Infrastructure Management System (BLIMS)

##### Data Repository

During 2002-03, populating of the data repository (inventory module) for the Building and Land Infrastructure System was completed in October 2002. Work commenced on the leasing module and is expected to be in production by March 2004. The facility evaluation software purchased in 2001-02 has been reconfigured to better meet program needs and is currently in the user acceptance-testing phase. The expected production date is August 2004.

In addition, during 2002-03, a mid-term business case analysis was undertaken to reconfirm the objectives of the BLIMS. Executive support was reconfirmed.

##### Performance Measures

Performance measures have been developed for the condition of government facilities, schools, health facilities, and post-secondary institutions, and are included in the Alberta Infrastructure 2003 – 06 Business Plan. In support of the development of BLIMS, a common methodology was developed that reflects the condition of all facilities using the same methodology (see details under performance measures portion of this report).

During 2002-03, Alberta Infrastructure's Performance Measures Committee worked extensively with the BLIMS Implementation Committee to ensure that the collection and maintenance of data within BLIMS would allow comparisons across buildings types, would ensure efficient reporting in support of the measures and would meet an audit test.

#### **Prediction/Optimization Modules**

In 2002-03, a detailed business case analysis was undertaken to reconfirm the project direction and identify changes that were required. Based on the results of this review, it was decided that the planning module would be put on hold until the completion of the inventory and leasing modules, anticipated in 2004.

#### **Executive Reporting Capability**

As an interim step to provide executive project reporting the ministry developed an Executive Project Reporting system that provides integrated project reporting for all types of infrastructure capital projects (government-owned and supported facilities). In the future, this system will be integrated into the BLIMS project module.

### **2.2.2 Environment Infrastructure Management System (EIMS)**

#### **Data Repository**

Inventory system including asset attributes and performance characteristics is operational and user tested. The system is now operational at several regional sites throughout the province. The Inventory system was enhanced as a result of digitizing some 60,000 records (mainly engineering drawings) at a cost of \$85,000. Inventory hardware in the form of laptops, digital cameras, GPS units, printers and scanners were obtained at a cost of about \$110,000.

#### **Performance Measures**

Measures for condition, utilization and functionality have been defined and reviewed by regional management. EIMS has the capability to report on performance measures and condition risk matrix index. Senior management agreed to incorporate the Water Management Condition Performance Measure as part of Goal 8 GOA 2003-06 Business Plan and hope to have all three measures in the next AENV Business Plan.

#### **Prediction/Optimization Modules**

Regional management has developed an approach for prioritizing projects using a risk index based on "consequence of failure" in each performance area. This approach was used to rank water management projects requiring rehabilitation/repair/replacement. Work on preparation of a Request For Proposal for an Infrastructure Management Module (IMM) to address the inspection/maintenance/prediction activities for water management infrastructure was undertaken with input from Alberta Transportation (AT), CIO's and Supply Management. AENV met with AT to pursue the possibility of joint use of an Optimization Module available through AT.

#### **Executive Reporting Capability**

Presently there is reporting capacity for factors including condition, risk, costs and need for further investigation. There is the capability to develop reports as required.

### **2.2.3 Collections and Exhibits Infrastructure Management System (CEIMS)**

#### **Data Repository**

In March 2002, Community Development purchased Gallery System's The Museum System software package to serve as the foundation for IMS for collections and exhibits. The application has been called HeRMIS for the **Heritage Resource Management Information System**. Throughout 2002-2003, departmental curatorial and collections management staff have worked closely with the system vendors to configure the base application to meet departmental needs. Data mapping and conversion to the new system is currently underway. It is anticipated that selected collections data will be placed within the new production environment by March 31, 2003. Additional collections data will be converted over the upcoming fiscal year. Significantly, analysis is currently being undertaken to evaluate the use of this system as the principal data management tool for the department's in-situ (land based archaeological, paleontological and built) heritage resources.

#### **Performance Measures**

Community Development has identified performance measures for heritage buildings, collections, exhibits and displays. Data collection has been completed only for owned heritage buildings. Data collection for collections and exhibits has not commenced over the last fiscal year as resources have been focused on deployment of the new HeRMIS system. The department is in the process of

developing a sampling strategy for data collection relative to performance measures for heritage collections.

The purchased system's (TMS) current release has a basic object conservation module designed to enable conservators to track object condition assessment and treatment programs. The system vendor has indicated that this module is slated to undergo significant re-design for the next release of the program. The vendor has recognized the need to work with the department to enhance this component of the program to better manage condition assessment and performance management tracking issues.

#### **Prediction/Optimization Modules**

Predictive and optimization tools are also not components of the selected TMS system. Enhancement of the system's conservation module will need to explore the possibility of including such tools.

#### **Executive Reporting Capability**

The TMS system has a range of standard collections management reporting tools. The development of specific tools relevant to collection's performance (i.e. condition) will form a component of subsequent report configuration exercises and will evolve in conjunction with the enhancement of the system's conservation modules.

### **2.2.4 Transportation Infrastructure Management System (TIMS)**

#### **Data Repository**

TIMS Release 1.0 went into full production June 10, 2002.

#### **Performance Measures**

The three performance measures for highway capital infrastructure are physical condition, utilization and functional adequacy. Through monitoring these measures, the department can effectively plan how best to sustain the quality of highways throughout the province.

These measures were extensively reviewed in 2002 and refinements made. The updated measures were incorporated into the 2003-06 Alberta Transportation and Government of Alberta business plan.

- The method of reporting physical condition now reflects the percentage of highways in good, fair and poor condition. The segments in poor condition are those that require attention in the near future. Trigger values were

determined for good/fair and fair/poor levels using a pro-active life cycle analysis concept. The values used are based on classification of road and past department practices.

- ❑ Utilization is defined as the percentage of the highway network that is equal to or better than a targeted Level of Service (LOS) (as defined by the United States Transportation Research Board Highway Capacity manual). If a highway meets or exceeds this targeted level, it is being utilized as planned. This measure did not change after the 2002 review.
- ❑ A provincial highway is functionally adequate if the roadway is a standard width, free of road bans, if the traffic is unrestricted by speed postings due to the geometric design of the roadway, and if the roadway has an appropriate surface type. Surface type was added as a factor in determining functional adequacy after the 2002 review. Functional adequacy is a key component in the overall planning and management of provincial highways.
- ❑ The functional adequacy measure will undergo further review in 2003. As well, the merits of adding performance measures for bridges will be investigated and recommendations made.

#### **Prediction/Optimization Modules**

- ❑ Additional years of surface condition data were incorporated into the pavement management system to further refine its predictive capabilities.
- ❑ The business requirements and functional prototype for the bridge expert analysis and decision support system (BEADS) are in place. When formal development occurs, the business requirements and functional prototype will be translated into deliverables based on the development methodology chosen. Work will proceed on BEADS based on funding availability and its priority ranking with other IT development projects in the Division.
- ❑ The high-level business requirements for the network expansion module were further defined in several key areas including the functional and data requirements for identifying planning studies. Work will proceed on the Network Expansion module based on funding availability and its priority ranking with other IT development projects in the Division.

Consensus has been reached on the department's approach to program optimization using life-cycle net present value of the projects being considered. Proof of concept testing for pavement preservation projects is continuing. Work will proceed on the optimization module based on funding availability and its priority ranking with other IT development projects in the Division.

### **Executive Reporting**

- ❑ TIMS Release 1.0 went into production June 10, 2002. This application has the facilities to generate executive level reports.
- ❑ An initiative has been identified to document the Capital Planning process in advance of developing business functional and data requirements. Work will proceed on this initiative based on funding availability and its priority ranking with other IT development projects in the Division.

### **2.2.5 Municipal Infrastructure Management Systems (MIMS)**

#### **Status of IMS**

The MIMS project is at least 90% complete as of March 31, 2003. MIMS is fully functional and is currently in use or is being implemented in 35 municipalities and by 15 engineering firms. Some final development tasks are being completed and a governance strategy is still to be determined.

The MIMS Management Committee believes that the project has been successful in developing a tool to meet municipal needs as identified at the beginning of the project. Those included:

- Establish and maintain an inventory of existing municipal infrastructure,
- Capture information on the condition, utilization and functionality of the infrastructure in a standardized format,
- Facilitate priority-setting for infrastructure upgrading and/or replacement on a needs-driven basis, and
- Facilitate sharing of information.

#### **Performance measure data and description of methodology used.**

The Municipal Infrastructure Management System (MIMS) provides a foundational solution for municipalities to manage and ultimately sustain their infrastructure. The fourth version of the application was released by March 31, 2003. The MIMS Tool Set includes a strong focus on consistent standardized data including infrastructure terminology and digital (spatial) data standards that leverage industry best practices. Since the initiative and application is voluntary, municipal participation is dependent on needs, sophistication of current practices, and their desire to enhance their infrastructure management. In some cases the availability of local or other funds for data collection and maintenance has encouraged the use of MIMS.

Options for longer-term maintenance and support of MIMS are currently under review.

The following describes the alignment of planned MIMS functionality in CPI terms:

#### **Data Repository**

The MIMS inventory system (road, water, sanitary and storm networks) includes asset attributes and performance characteristics. This is operational and user tested including municipal public works, administrators, and associated engineering firms working with municipalities. Each of the modules operates on a stand-alone basis; however they can be integrated in terms of the spatial data and through the map viewer. Useful analysis and query spatial functionality is provided in MIMS including common spatial tools such as measuring, thematic mapping, linear referencing, and import/export of data. This includes viewing a wide variety of disparate CAD and GIS files, as is typical in a municipal environment. The MIMS Tool Set includes intuitive wizards, videos demonstrating functionality, a training manual, data specifications, and a data dictionary within the software package.

#### **Performance Measures**

The primary performance indicator widely used in MIMS is condition assessment. Functional adequacy has now been incorporated at a summary level for all assets within MIMS. Utilization (capacity) is included on several of the key asset types, to a limited level of complexity.

#### **Prediction/Optimization Modules**

This type of modeling is not currently supported within the application however, the application can allow for the export of data to such advanced optimization tools.

#### **Executive Reporting Capability**

Presently there is reporting capacity for factors including inventory assets, condition, and completed work done to date, etc. Inspection, testing, and maintenance events can be recorded. Standard reports have been developed and there is the capability to develop a wide variety of reports as required by the business users. However, there will not be the capacity to align with provincial budget and Corporate Capital Overview targets and prioritizations within MIMS. Data would have to be exported for this purpose.

## **STRATEGY 2**

### **INFRASTRUCTURE MANAGEMENT SYSTEMS (IMS)**

# **PERFORMANCE MEASURES**

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**STRATEGY 2 - PERFORMANCE MEASURES  
OWNED AND SUPPORTED INFRASTRUCTURE**

**3.1 Purpose**

Progress continued to be made in the collection of performance data for both owned and supported infrastructure. The following are the key performance measures used by all ministries with responsibility for owned or supported physical infrastructure:

| Performance Criteria | Measure                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------|
| Physical Condition   | Percentage of physical infrastructure rated as being in acceptable condition.                  |
| Utilization          | Percentage of physical infrastructure for which utilization level is within targeted capacity. |
| Functional Adequacy  | Percentage of physical infrastructure that provides acceptable functional service.             |

The target for 2002-03 was to:

*Continue to refine and report on performance measures for physical condition, utilization, and functional adequacy of owned and supported infrastructure.*

## 3.2 Results

### Summary

Following is performance data for the key performance measures for 2002-03 for owned infrastructure and supported infrastructure. Details of performance measures are included on subsequent pages.

**Table 1**  
**Performance Data –**  
**OWNED INFRASTRUCTURE 2002-03 <sup>1</sup>**

| Category of Infrastructure              | Notes | Replacement Value (\$ Million) | % of Total Infrastructure | Physical Condition    | Utilization                          | Functional Adequacy            |
|-----------------------------------------|-------|--------------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|
|                                         |       |                                |                           | % Rated as Acceptable | % Utilization within Target Capacity | % Providing Acceptable Service |
| Buildings                               | 2,3,4 | 5,518                          | 17%                       | 97%                   | 92%                                  | 87%                            |
| Transportation                          | 5,6   | 19,600                         | 61%                       | 88%                   | 99%                                  | 81%                            |
| Water Management                        |       | 4,300                          | 13%                       | 96%                   | N/A                                  | 99%                            |
| Aggregated Owned Infrastructure 2002-03 | 7     | 29,418                         | 92%                       | 91%                   | 98%                                  | 85%                            |
| Aggregated Owned Infrastructure 2001-02 |       | 31,071                         | 96%                       | 96%                   | 98%                                  | 85%                            |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. The percentage of buildings rated as 'in acceptable physical condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life.
3. Replacement value of government buildings is based on an average cost of \$1650 /m2.
4. Replacement values for heritage buildings were reassessed and devalued from 2001-02.
5. Replacement value is under review.
6. A change in methodology for assessing physical condition for roads results in a lower rating from 2001-02.
7. Data is not available for parks infrastructure, lands and forests buildings, other roads and infrastructure, exhibits, interpretive infrastructure and bridges.

**Table 2**  
**Performance Data -**  
**SUPPORTED INFRASTRUCTURE 2002-03 <sup>1</sup>**

| Category of Infrastructure                  | Notes | Replacement Value (\$ Million) | % of Total Infrastructure | Physical Condition    | Utilization                          | Functional Adequacy            |
|---------------------------------------------|-------|--------------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|
|                                             |       |                                |                           | % Rated as Acceptable | % Utilization within Target Capacity | % Providing Acceptable Service |
| Buildings                                   | 2     | 20,650                         | N/A                       | 92%                   | N/A                                  | N/A                            |
| Water Management (Irrigation)               |       | 2,000                          | N/A                       | N/A                   | 92%                                  | N/A                            |
| Aggregated Supported Infrastructure 2002-03 | 3     | 22,650                         | N/A                       | N/A                   | N/A                                  | N/A                            |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. Includes health facilities, schools, and post-secondary institutions.
3. Replacement value for municipal infrastructure, social housing and designated historic sites is not included. Municipal infrastructure is a significant portion of supported infrastructure.

### 3.3 Physical Condition Performance Measure

#### Measure

Percentage rated in acceptable condition, which includes 'fair' and 'good' condition on a 3-point scale of 'poor', 'fair', 'good'.

#### Rationale

Current physical condition is a critical factor involved in the decision to reconstruct, rehabilitate and maintain infrastructure.

#### Scope

Includes current physical condition of infrastructure based on established standards for that particular type of infrastructure (e.g. load bearing capacity, sound/stable foundation; and compliance with health and safety standards, fire regulations, ventilation system).

#### Methodology

The physical condition of infrastructure will be rated based on a common rating scale (i.e. poor, fair, good) with 'fair' and 'good' rated as 'acceptable'. Established infrastructure-specific standards are used as the basis for rating physical condition.

Following is a detailed description of how the government-wide definitions for physical condition have been applied for specific owned infrastructure types for 2002-03.

#### 3.3.1 Building Infrastructure - Physical Condition

##### Infrastructure Buildings – Owned and Operated, and Supported (Health Facilities, Schools and Post Secondary Institutions)

The measure is the percentage of total buildings that are rated in acceptable condition that includes 'fair' and 'good' condition as indicated by the following definitions.

|             |                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Good</b> | Adequate for intended use and expected to provide continued service life with average maintenance.                                                     |
| <b>Fair</b> | Components are aging and nearing the end of their life cycle requiring additional expenditures for renewal or refurbishing.                            |
| <b>Poor</b> | Requires upgrading to comply with minimum codes or standards and deterioration has reached the point where major repairs or replacement are necessary. |

Throughout the 2002-03 fiscal year, Alberta Infrastructure undertook a detailed analysis of existing performance measure methodologies used within the ministry and in industry. In order to ensure a consistent system for organizing and categorizing elements of a building or site for Alberta Infrastructure and its external stakeholders, the ministry has adopted a system called UniFormat. UniFormat is the standard classification system of building and site-related elements, developed and administered by the American Society for Testing and Materials (ASTM) and is used by many organizations. It has the flexibility to allow users to maintain high-level information, such as that which may be used for sheds and other smaller buildings, or it can provide a very detailed level, which may be used for hospitals.

After extensive research and evaluation, the ministry purchased a provincial license for RECAPP (Real Estate Capital Asset Priority Planning) software to facilitate consolidation of the existing evaluation systems. A key functionality of RECAPP exists in the use of the Facility Condition Index (FCI), which represents the percentage obtained by dividing the building replacement cost and renewal requirements in a given year by the building replacement costs of the facility. FIC will provide an analytical method to benchmark building condition, enabling comparison of different facility types and supporting funding decisions.

Commencing in 2003-04, building condition for government-owned facilities, health facilities, schools and post-secondary facilities, will be calculated using the Facility Condition Index represented by the percentage of the total estimated value of maintenance and renewal requirements over the next five years divided by the building replacement cost.

#### **Parks, Lands and Forests Buildings - Owned**

Community Development worked with Alberta Infrastructure to develop a module in BLIMS that is specific for park infrastructure. In 2002-03, physical condition ratings were collected using a three point system (Good, Fair and Poor) for the park infrastructure in Kananaskis Country, which represents 44 percent of the replacement value of the park infrastructure. Physical condition data for the remainder of the park infrastructure will be collected and entered into BLIMS in 2003-04.

#### **Social Housing – Owned and Supported**

The measure is based on the condition of all active buildings using a modified version of the instrument used for government owned buildings. Independent consultants make ratings on individual building components as well as on the overall building condition using a five-point scale. Ratings are converted to the standard three-point system. The same methodology is used for owned and supported housing.

#### **Heritage Buildings - Owned**

Heritage buildings are those which are significant for their architectural merit or for their historical associations. The province owns and manages 14 heritage buildings where heritage landscapes and structures comprise part of the sites' infrastructure. Of these, 11 are operational sites, and 3 contain structures that are either stabilized or are awaiting stabilization.

Operational historic buildings are an integral part of the department's core business objective to preserve and present Alberta's cultural history. The goal is to maintain these historic buildings as valuable examples of our history. For operational buildings, the department uses the same three point system employed by Infrastructure (Good, Fair, Poor).

Cultural landscapes are often developed in association with historic buildings. The department applies the same performance measurement framework as operational historic buildings.

At selected sites the department has limited site development to the stabilization of existing structures or ruins (i.e. Leitch Collieries). At sites awaiting development, structures are protected in the interim by being "mothballed". In these instances these measures are modified as follows:

- Good** Adequate measures have been taken to prevent intrusion or accelerated deterioration. Only minor annual preventative maintenance is required.
- Fair** Measures to prevent intrusion or accelerated deterioration are failing. Moderated scheduled maintenance is required within 3-5 years.
- Poor** Measures have failed or have not been put in place to prevent accelerated deterioration or intrusion. Major capital maintenance is required within 1-2 years to prevent irreversible damage.

#### **3.3.2 Transportation Infrastructure - Physical Condition**

##### **Provincial Highways - Owned**

Physical condition for provincial highways is based on riding comfort measured by the International Roughness Index (IRI). IRI is a direct measure of the roughness of the road, but is also an indicator of overall pavement condition (including factors such as structural condition and other surface distress such as rutting). The IRI rating for all highways is obtained through data collected by private consultants on behalf of the ministry, and is averaged over 1 km segments.

The method of reporting physical condition was changed in the 2002-03 fiscal year and now reflects the percentage of highways in good, fair and poor condition. The segments in poor condition are those that require attention in the near future. The table below illustrates the IRI values used for good, fair and poor ratings.

| FHWA Standard |                   |                   |
|---------------|-------------------|-------------------|
| IRI Rating    | U.S. Interstate   | Non-Interstate    |
| Good          | Less than 1.49    | Less than 1.49    |
| Fair          | 1.50 – 1.89       | 1.50 – 2.09       |
| Poor          | Greater than 1.89 | Greater than 2.09 |

**Bridges and Structures - Owned**

This measure is currently under development.

**3.3.3 Water Management Infrastructure - Physical Condition**

**Owned and Supported**

This measure is based on an assessment of water management structures, including headworks, dams and irrigation canals. The measure is the percentage of infrastructure totalled by replacement value that is in acceptable condition. Acceptable condition includes infrastructure in 'good' or 'fair' condition as indicated by the following rating definitions.

- Good**      Ranging from new or 'like new', requiring minimal maintenance; to fully operational and requiring normal maintenance.
- Fair**        Operational but requiring considerable ongoing maintenance.
- Poor**        Ranging from operational, with excessive ongoing maintenance, and failure may be possible during a major event; to not operational, or failure may be imminent or occurred.

The assessments are done by independent consultants on the basis of visual inspections and discussions with staff that are familiar with the operation of the infrastructure. The five-point scale used for the ratings is converted to the above three-point scale. Where initial inspections identify potential problems, a more detailed (level 2) analysis utilizing engineering techniques is employed to confirm the nature and extent of the problems.

A consequence of failure rating is also determined and combined with the condition rating in a matrix format to determine a risk index value for the infrastructure. This approach is used or being considered by other jurisdictions in North America.

The comprehensiveness of the assessment instrument continues to be reviewed in light of best practices in other jurisdictions.

### **3.3.4 Historical Collections – Physical Condition**

The owned historical collections of Community Development are comprised of the artifact, specimen and archival holdings of the Provincial Museum of Alberta, the Provincial Archives of Alberta, the Royal Tyrrell Museum of Alberta, the Glenbow Museum and the human history collections of the sites comprising the Historic Sites Service of Alberta.

This measure consists of two essential components. The first measures the actual condition of the items within a collection through the application of a three-point scale. The final rating is given as the percentage of items within a given collection meeting the given performance standard. The percentage is calculated in terms of replacement value. For reporting purposes, the lowest rating of the two measures is reported.

- |             |                                                                                                                                                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Good</b> | Items in the collection do not require treatment and can be used for exhibit and research without prior treatment, archival holdings have been processed for preservation (reboxed, refolded and contaminants removed).                          |
| <b>Fair</b> | Items in the collection require treatment to ensure on-going conservation or to enable utilization for exhibit or research, only a portion of the archival objects have been processed for preservation.                                         |
| <b>Poor</b> | Artifacts that are extremely unstable, in poor condition, or which require <b>extensive</b> treatment either to insure conservation or to enable utilization for exhibit or research. Archival objects have not been processed for preservation. |

The second measure reflects the impact of adherence to standards for protection and preservation on actual collection condition. As with other measures a three-point scale is used.

- |             |                                                                                                                                                                                                                                                                      |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Good</b> | The collection is stored in a manner that meets accepted museum/archival standards for storage equipment (proper cabinets, materials coverings, shelves etc), storage environment (light, temperature, and humidity) and security for the given class of collection. |
| <b>Fair</b> | Some aspects of storage, environmental control or security provisions do not meet museum/archival standards.                                                                                                                                                         |

- Poor**      The collection is stored such that standards of storage, environmental control or security provisions are inadequate and inconsistent with museum/archival standards.

Community Development recognizes that the relative value of collections varies and reflects this value by tiering its collections. Performance measures are not applied to the lowest tiered objects within collections.

### **3.3.5 Heritage Exhibits – Physical Condition**

Community Development operates a network of 18 heritage buildings and museum facilities. These range in size from major museums to a single historic building. As a means of interpreting the significance of these sites, the department has developed a wide range of galleries, exhibits and audio/visual presentations. The department measures the condition of these interpretive facilities using a three-point scale. Among the range of systems evaluated are exhibit lighting, graphic and text panels including way finding signage, audio visual presentations and equipment, exhibit surfaces and finishes.

- Good**      Exhibit systems are functional and require only regular maintenance.
- Fair**        Exhibit systems require service, upgrading or renewal, but still function.
- Poor**        Exhibit system(s) are obsolete and/or not functional.

### 3.3.6 Target and Results

**Table 3**  
**Physical Condition –**  
**OWNED INFRASTRUCTURE – 2002-03 <sup>1</sup>**

| Category of Infrastructure               | Notes | Replacement Value (\$Millions) | % of Total   | 2002-03 % Rated as Acceptable | 2003-04 Target % Rated as Acceptable |
|------------------------------------------|-------|--------------------------------|--------------|-------------------------------|--------------------------------------|
| <b>Buildings</b>                         |       |                                |              |                               |                                      |
| Social Housing                           |       | 2,000                          |              | 97%                           |                                      |
| Government Buildings                     | 2,3   | 3,500                          |              | 97%                           | 97%                                  |
| Heritage Buildings                       | 4     | 18                             |              | 77%                           |                                      |
| <b>Total Buildings</b>                   |       | <b>5,518</b>                   | <b>17.3%</b> | <b>97%</b>                    |                                      |
| <b>Transportation</b>                    | 5,6   | <b>19,600</b>                  | <b>61.3%</b> | <b>88.0%</b>                  | <b>86.5%</b>                         |
| <b>Water Management</b>                  |       | <b>4,300</b>                   | <b>13.5%</b> | <b>96%</b>                    |                                      |
| <b>AGGREGATED INFRASTRUCTURE</b>         |       | <b>29,418</b>                  | <b>92.0%</b> | <b>91%</b>                    |                                      |
| <b>Bridges</b>                           |       | 1,613                          | 5.0%         | N/A                           |                                      |
| Historical Collections/Heritage Exhibits | 7     | 492                            | 1.5%         | N/A                           |                                      |
| Other                                    | 8     | 440                            | 1.4%         | N/A                           |                                      |
| <b>TOTAL-OWNED INFRASTRUCTURE</b>        |       | <b>31,963</b>                  | <b>100%</b>  |                               |                                      |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. The percentage of buildings rated as 'in acceptable condition' includes those rated as good and fair. A significant portion of the buildings are rated in 'fair' condition, which indicates that components are nearing the end of their useful life.
3. Replacement value is based on an average cost of \$1650/m2
4. Most heritage buildings are acceptable, the lower rating reflects the large number of buildings at the undeveloped Turner Valley Gas Plant and Bitumont sites. These buildings were reassessed and devalued in 2002-03.
5. Replacement value is under review
6. A change in methodology for assessing physical condition for roads results in a lower rating from 2001-02
7. Based on market value.
8. Includes park buildings, park roads, and other park infrastructure (\$381 million), Other Roads (\$15 million), and Lands and Forests Infrastructure (\$44 million).

**Table 4**  
**Physical Condition –**  
**SUPPORTED INFRASTRUCTURE – 2002-03 <sup>1</sup>**

| Category of Infrastructure    | Notes | Replacement Value (\$Millions) | 2002-03 % Rated as Acceptable | 2003-04 Target % Rated as Acceptable |
|-------------------------------|-------|--------------------------------|-------------------------------|--------------------------------------|
| <b>Buildings</b>              |       |                                |                               |                                      |
| Schools                       |       | 9,000                          | 92%                           | 93%                                  |
| Post Secondary Institutions   |       | 5,400                          | 92%                           | 91%                                  |
| Health Facilities             |       | 6,250                          | 92%                           | 92%                                  |
| <b>Total Buildings</b>        |       | <b>20,650</b>                  | <b>92%</b>                    | <b>92%</b>                           |
| Water Management (Irrigation) |       | 2,000                          | N/A                           |                                      |
| Municipal Infrastructure      |       | N/A                            | N/A                           |                                      |
| Designated Heritage Buildings |       | N/A                            | N/A                           |                                      |
| Social Housing                | 2     | N/A                            | 99%                           |                                      |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.

2. Replacement value is not available as insurance is the responsibility of the property owner.

Measure is based on number of units rather than replacement value.

### 3.4 Utilization Performance Measure

#### Measure

Percentage of infrastructure whose utilization is within targeted capacity.

#### Rationale

Intention of the measure is to determine the number of facilities that are well utilized. Significant over-utilization or underutilization may indicate the need to construct, reconstruct, rehabilitate, or dispose of facilities.

#### Scope

Includes measures of actual vs. targeted utilization of facilities or structures (e.g., percentage occupied, flow rate, volume of water conveyed/stored).

#### Methodology

Utilization level is the percentage of the replacement value of physical infrastructure that is utilized within the targeted capacity. Targeted capacity is different from design capacity, as expansions/redesign may have adjusted available service capacity. Targeted capacity may differ from 'rated capacity' as a result of program decisions as to how the facility is to be used.

Each Ministry will develop measures of target and actual utilization that are appropriate to the use and type of infrastructure.

Following is a more detailed description of how these definitions have been applied for each type of owned infrastructure for 2002-03.

### **3.4.1 Building Infrastructure - Utilization**

During 2002-03, extensive review was undertaken into the current methodologies used for Alberta Infrastructure owned and operated buildings, as well as supported buildings (health facilities, schools, and post-secondary facilities). It was determined that, due to the differing factors used to determine utilization in the various types of facilities and to ensure that the measure would be a useful tool in measuring utilization of all facilities, the existing methods used for each type of facility were the most appropriate. All of the existing measures are based on capacity; however, different formulas applied for each type of facility. Following the review, it was agreed that a common reference would be used to describe capacity, being useable square metres.

#### **Infrastructure Buildings – Owned and Operated**

The measure is the percentage of buildings with utilization between 85 per cent and 100 per cent. The measure is based on the ratio of allocated useable space to total useable space. Space may be allocated to a government department, board, agency or commission, to government-supported organizations (e.g., health authority, school board, post secondary institution) or to a non-government user (for example, facilities which are being retained, but for which there are no current government requirements).

The measure includes all Alberta Infrastructure owned and operated buildings over 1000 m<sup>2</sup>. The measure is calculated on the basis of inventory data that is maintained by Infrastructure and verified annually by client departments. Currently the 309 owned buildings in the inventory that meet this criterion represent approximately 85 per cent of the total area of owned space.

#### **School Facilities - Supported**

This measure was included in Alberta Infrastructure's 2003-06 Business Plan. The measure is calculated as student enrolments as a percentage of school building capacity. Student enrolments are based on student data as of September 30, provided annually by Alberta Learning. The capacity of a school building is based on an allowance of building area per student, established for elementary, junior high and high school students. The allowance is adjusted for special needs students, as they require more space than mainstream students. For high schools built before 1990, building capacity is based on a formula identifying the number of classrooms in the building at 25 students per classroom.

#### **Health Facilities - Supported**

This is a new measure, which was included in the 2003-06 Business Plan. The utilization of health care facilities is currently calculated in accordance with the April 2002 Health Facility Utilization Guideline on a facility-by-facility basis using the following ratio:

Gross Building Area – Vacant or Available Area + Additional Required Area +  
Gross Building Area

The Utilization Guideline was developed in consultation with Alberta Health and Wellness and the Health Regions. It includes rules and considerations for determining vacant or available space. Additional required areas are obtained from approved functional programs that include a requirement for new space.

#### **Post-Secondary Facilities - Supported**

This measure is currently under development. A detailed utilization study of all post-secondary institutions commenced in early 2003 and is scheduled for completion in March 2004. Following the study, a utilization measure for post-secondary facilities will be developed for inclusion in the 2004-07 Business Plan.

#### **Parks, Lands and Forests Buildings - Owned**

No further work was done in 2002-03 to develop a meaningful/useful measure. It is primarily intended to address smaller buildings associated with Parks and Land and Forest programs. The proposal under review was:

- ❑ Seasonal facilities generally will be rated at 100 percent unless the structure is no longer in use.
- ❑ Full-time use facilities rated as the amount of floor space actually being used or additional space that is being rented, etc., as a percent of the total allocated floor space.

#### **Social Housing – Owned and Supported**

This measure is the percentage of all social housing facilities that are occupied by approved tenants, whether the buildings are owned or supported. The measure is calculated on the basis of monthly vacancy information that is submitted by management groups and bodies.

#### **Heritage Buildings – Owned**

For owned heritage structures the utilization level will be the percentage of assets (by market value) which are fully accessible to the public, or which are publicly accessible under controlled circumstances.

#### **Heritage Buildings – Supported**

Supported heritage structures are defined as those heritage buildings designated by the province under the Historical Resources Act that are not owned by the Province. Support is provided in the form of grant assistance from the Alberta Historical Resources Foundation towards the preservation and restoration of the resources. Recognizing that buildings that are vacant are under greater threat of destruction, Alberta Community Development's performance measure for supported heritage structures will be the percentage of supported assets currently being utilized.

### **3.4.2 Transportation Infrastructure - Utilization**

#### **Highways - Owned**

Utilization of provincial highways is defined as the percentage of the provincial highway network that is equal to, or better than, a targeted level of service (LOS). If a highway meets or exceeds this targeted level, it is being utilized as planned. The targeted LOS for provincial highways is C, as that level triggers future upgrading. LOS is an international measure based on the ability of traffic to move freely. The scale ranges from A to F, with A representing no restrictions on flow and F representing a breakdown of flow. The LOS calculations are based on the methodology outlined by the United States Transportation Research Board.

#### **Bridges and Structures - Owned**

As bridges form an indivisible part of the overall highway network, the highway utilization measure includes the bridge component.

### **3.4.3 Water Infrastructure - Utilization**

#### **Water Management - Owned**

This is a measure of an asset's ability to meet its design requirements (equivalent to the CPI targeted capacity). The measure is defined using a percentage scale that indicates the level of design requirement that the asset is capable of meeting. For some types of water management infrastructure, utilization can exceed design requirement, and so the measure is not limited to 100 per cent. For example, the amount of water that a canal is capable of conveying could exceed the amount of water that the canal was designed to convey.

Utilization is a measure of the water being delivered relative to the amount of water the asset is capable of delivering. This measure can be used for all types of water infrastructure by applying the same principles. For example, the amount of water a reservoir is able to store or the amount of water a drainage ditch could theoretically convey.

The targeted capacity determination for water infrastructure has not been finalized.

**Irrigation Works - Supported**

The measure of utilization is based on the number of acres irrigated as a percentage of the number of acres assessed. Utilization in excess of 85 per cent is considered to be within target capacity.

**3.4.4 Historical Collections - Utilization**

The performance measure will be the percentage of the assets held in the department's collections that meet the prescribed utilization requirements, such as:

- ☐ Does the artifact/specimen's condition allow it to be displayed or examined for research purposes?
- ☐ Do the conditions under which the artifact/specimen is stored enable easy access for examination and study purposes?
- ☐ Is record keeping associated with the artifact/specimen sufficient to enable its use, is it recorded in a database, is it labeled, are all required fields completed in the catalogue?
- ☐ For newly accessioned artifacts, how long does it take to enter all information into the catalogue or database?

**3.4.5 Heritage Exhibits and Displays - Utilization**

Annual surveys track visitor satisfaction with exhibits, signage on displays and film/audio-visual components at provincially operated heritage sites and museums. Surveys also track the extent to which visitors rate the knowledge they have gained of Alberta's history as a result of their visit to the site.

The department will report the percentage of these assets (by market value) that receive "neither good nor poor", "good" or "excellent" response to these evaluations.

### 3.4.6 Target and Results

Table 5  
Utilization –  
OWNED INFRASTRUCTURE 2002-03 <sup>1</sup>

| Category of Infrastructure               | Notes | Replacement Value<br>(\$Millions) | % of Total   | 2002-03<br>% Within<br>Targeted<br>Utilization | 2003-04 Target<br>% Within<br>Targeted<br>Utilization |
|------------------------------------------|-------|-----------------------------------|--------------|------------------------------------------------|-------------------------------------------------------|
| <b>Buildings</b>                         |       |                                   |              |                                                |                                                       |
| Social Housing                           |       | 2,000                             |              | 96%                                            |                                                       |
| Government Buildings                     | 2     | 2,964                             |              | 89%                                            | 89%                                                   |
| Heritage Buildings                       | 3     | 18                                |              | 81%                                            |                                                       |
| <b>Total Buildings</b>                   |       | <b>4,982</b>                      | <b>15.6%</b> | <b>92%</b>                                     |                                                       |
| <b>Transportation</b>                    | 4     | <b>21,213</b>                     | <b>66.4%</b> | <b>99%</b>                                     | <b>99%</b>                                            |
| <b>AGGREGATED INFRASTRUCTURE</b>         |       | <b>26,195</b>                     | <b>82.0%</b> | <b>97.6%</b>                                   |                                                       |
| Water Management                         | 5     | 4,300                             | 13.5%        | N/A                                            |                                                       |
| Historical Collections/Heritage Exhibits | 6     | 492                               | 1.5%         | N/A                                            |                                                       |
| Other                                    | 7     | 976                               | 3.1%         | N/A                                            |                                                       |
| <b>TOTAL-OWNED INFRASTRUCTURE</b>        |       | <b>31,963</b>                     | <b>100%</b>  |                                                |                                                       |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. Replacement value is based on an average cost of \$1650/m<sup>2</sup>.
3. Most heritage buildings are acceptable, the lower rating reflects the large number of buildings at the undeveloped Turner Valley Gas Plant and Bitumont sites. These buildings were reassessed and devalued in 2002-03.
4. Includes provincial highways, bridges and structures.
5. Performance under revised measure is being determined.
6. Based on market value.
7. Includes buildings under 1000 m<sup>2</sup> (\$536 million), Parks infrastructure (\$381 million), Other Roads (\$15 million), and Lands and Forests Infrastructure (\$44 million).

Table 6  
Utilization –  
SUPPORTED INFRASTRUCTURE 2002-03 <sup>1</sup>

| Category of Infrastructure    | Notes | Replacement Value<br>(\$Millions) | 2002-03<br>% Within<br>Targeted<br>Utilization | 2003-04<br>% Within<br>Targeted<br>Utilization |
|-------------------------------|-------|-----------------------------------|------------------------------------------------|------------------------------------------------|
| <b>Buildings</b>              |       |                                   |                                                |                                                |
| Schools                       | 2     | 9,000                             | 76%                                            | 74%                                            |
| Post Secondary Institutions   | 2     | 5,400                             | N/A                                            | N/A                                            |
| Health Facilities             | 2     | 6,250                             | N/A                                            | N/A                                            |
| <b>Total Buildings</b>        |       | <b>20,650</b>                     | <b>N/A</b>                                     |                                                |
| Water Management (Irrigation) |       | 2,000                             | 92%                                            |                                                |
| Municipal Infrastructure      |       | N/A                               | N/A                                            |                                                |
| Social Housing                | 3,4   | N/A                               | 96%                                            |                                                |
| Designated Heritage Buildings | 3     | N/A                               | N/A                                            |                                                |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.
2. These measures are under development.
3. Replacement value is not available as insurance is the responsibility of the property owner.
4. Measure is based on number of units rather than replacement value.

### **3.5 Functional Adequacy Performance Measure**

This section outlines the government-wide definition, rationale and criteria for development of functional adequacy performance measures as well as specific measures developed for each type of infrastructure and the methodology used in applying the measures.

#### **Measure**

Percentage of infrastructure that provides acceptable functional service.

#### **Rationale**

Infrastructure may be in good physical condition with sufficient available capacity to meet demand, but poor physical layout or inefficient design may reduce operational usefulness or efficiency.

#### **Scope**

Assessments of whether infrastructure is able to meet program requirements or provide an adequate level of service. Poor physical layout (i.e. ergonomics), inefficient design (i.e. high operating costs), and converted use facilities may contribute to functional inadequacies.

The measure may include suitability of location and ability to meet present and future program requirements. For example, poor location may result in underutilization.

#### **Methodology**

Facilities will be rated as acceptable or unacceptable.

Following is a more detailed description of how these definitions have been applied for owned infrastructure for 2002-03.

#### **3.5.1 Building Infrastructure - Functional Adequacy**

##### **Infrastructure Buildings – Owned and Operated**

The measure is defined as the percentage of ministry owned and operated facilities over 1,000 gross square meters providing acceptable functional service. Facilities that meet current or anticipated program requirements are rated as acceptable. Currently the 309 owned buildings in the inventory that meet this criterion represents approximately 85 per cent of the total area of owned space.

Functional adequacy takes into account the capacity to support the delivery of programs and to accommodate functions, as well as the suitability of the location. Functional adequacy is also a key factor considered in capital decision-making. Functional adequacy of a building, as a whole, is based on general criteria and the

expertise and assessment by Infrastructure staff in consultation with program departments.

**School Facilities – Supported**

Significant review was undertaken during 2002-03 to develop a functionality measure for all types of facilities (Alberta Infrastructure owned and operated and supported) that would meet the program requirements and serve as a useful tool in evaluating future program needs. A template was developed to provide guidance to program staff in collecting and evaluating data. Due to the complexity of the data collection and the tie-in with the implementation of the BLIMS system, work continues on an implementation plan to enable the department and stakeholders to cost-effectively and efficiently collect required data over time. It is anticipated that a proposed measure will be included in the 2004-07 Business Plan.

**Health Facilities – Supported**

See explanation under School Facilities.

**Post-Secondary Facilities – Supported**

See explanation under School Facilities.

**Parks, Lands and Forests Buildings - Owned**

No further work was done in 2002-03 to develop a meaningful measure of functional adequacy. It is primarily intended to address smaller buildings associated with Parks and Land and Forest programs. The proposal under review is:

|                   |                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Acceptable</b> | structure meets all applicable codes, is suitably located, meets current needs and is of sufficient size and composition to serve the intended need. |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|

|                     |                                                                                                                                                                                         |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unacceptable</b> | structure does not meet one or more applicable codes, or is not suitably located, or does not meet current needs and is of insufficient size or composition to serve the intended need. |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Social Housing – Owned and Supported**

The measure is the percentage of all social housing buildings that meet the current or anticipated social housing functional program requirements. Assessment of functional adequacy is based on the knowledge and discretion of Alberta Seniors, Housing Advisors in consultation with the management bodies administering the property. The same methodology is used for owned and supported housing.

**Heritage Buildings – Owned and Supported**

The management of heritage building assets involves not only the maintenance of condition, but also the preservation of heritage character. For a building or site to be considered a heritage asset it must not only be of significance, it must also possess "integrity". A site's "integrity" is its ability to convey its significance and is determined by giving consideration to its location, design, setting, materials, workmanship, feeling and association.

Currently the department is developing specific criteria to assist in the measurement of integrity.

### 3.5.2 Transportation Infrastructure - Functional Adequacy

#### Highways - Owned

Functional adequacy is defined by the percentage of road infrastructure that is rated as meeting target criteria. A provincial highway is functionally adequate if the roadway is a standard width and if the traffic is unrestricted by speed postings due to geometrics or road bans.

#### Bridges and Structures - Owned

This measure is currently under development.

### 3.5.3 Water Management Infrastructure - Functional Adequacy

#### Owned and Supported

**Acceptable** The water management infrastructure satisfies any one or more of the following criteria, depending on the type of infrastructure:

- ☐ meets current *Dam and Canal Safety Guidelines*, or
- ☐ is in an appropriate location, or
- ☐ meets current operational requirements.
- ☐ has sufficient range of measurement capability (water monitoring infrastructure).

**Unacceptable** The water management infrastructure does not satisfy any one or more of the following criteria, depending on the type of infrastructure:

- ☐ does not meet current *Dam and Canal Safety Guidelines*, or does not meet current operational requirements, or
- ☐ has insufficient range of measurement capability (water monitoring infrastructure).

The Dam and Canal Safety guidelines issued by Alberta Environment provide information as to how the Water Act Regulation for Dam and Canal Safety is administered. The purpose of the regulation is to promote the safety of dams and canals primarily to prevent loss of life and secondary, economic losses due to failure of the structures. A dam of at least 2.5 meters high and having at least

30,000 cubic meters in reservoir capacity and a canal conveying at least 15 cubic meters per second with an embankment of at least 2.5 meters high are governed by the regulation. Other structures may be considered at the discretion of administrator of the regulation. The regulation notes requirements the licensee needs to address for the safety of any person or property affected or likely to be affected by a dam or canal. These requirements cover but are not limited to; inflow design flood, spillway capacity, freeboard allowance, dam stability, and incremental consequences of failure. The Guidelines in conjunction with the Water Act Regulation help to determine the Functional Adequacy of water management infrastructure.

Poor location and/or lack of water supply also affects functional adequacy of water management infrastructure. Sufficient water supply may no longer be available within a certain area because of climate change, for example, resulting in a change to the infrastructure functional adequacy even though the water supply objective or demand may not have changed. A change in the course of a river because of a flood, for example, could change the functional adequacy of the infrastructure located on that river.

#### **3.5.4 Historical Collections – Functional Adequacy**

Collections will be considered to be functionally inadequate if they are considered to be an inadequate representation of a functional group, when significant collecting is required to make the collection fully functional or when greater than 30 per cent of the collection requires de-accessioning due to inadequate provenance or extremely poor condition.

Collection storage areas will be considered functionally inadequate if they do not allow for significant collection growth, if the storage area's layout and location is such that the collection is disjunct and separated from staff, and the space is otherwise inadequate and difficult to utilize.

#### **3.5.5 Heritage Exhibits and Displays – Functional Adequacy**

The functional adequacy of the department's exhibits and displays is often directly related to their age. Exhibits, displays and audio visual presentations must remain historically accurate and current in their presentation techniques. On-going research or changing aspects of historiography may render message content either inaccurate or inappropriate while dated technology, exhibit techniques, or exhibit styles may detract from the exhibit's interpretive message.

Where exhibits are greater than 10 years old, an analysis will be undertaken to determine whether the majority of the exhibit is considered to have:

- ☐ Content and information which is accurate and appropriate.
- ☐ An exhibit style and presentation techniques which do not detract from the interpretive message.

**3.5.6 Target and Results**

On the following page are the 2002-03 Functional Adequacy Results and the 2003-04 Targets for Owned Infrastructure. Measures are not available for Supported Infrastructure.

Table 7  
Functional Adequacy –  
OWNED INFRASTRUCTURE 2002-03 <sup>1</sup>

| Category of Infrastructure               | Notes | Replacement Value (\$Millions) | % of Total   | 2002-03 % Providing Acceptable Service | 2003-04 Target % Providing Acceptable Service |
|------------------------------------------|-------|--------------------------------|--------------|----------------------------------------|-----------------------------------------------|
| <b>Buildings</b>                         |       |                                |              |                                        |                                               |
| Social Housing                           |       | 2,000                          |              | 99%                                    |                                               |
| Government Buildings                     | 2     | 2,964                          |              | 79%                                    | 79%                                           |
| Heritage Buildings                       | 3     | 18                             |              | 80%                                    |                                               |
| <b>Total Buildings</b>                   |       | <b>4,982</b>                   | <b>15.6%</b> | <b>87%</b>                             |                                               |
| <b>Transportation</b>                    |       | <b>19,600</b>                  | <b>61.3%</b> | <b>81%</b>                             | <b>81%</b>                                    |
| <b>Water Management</b>                  |       | <b>4,300</b>                   | <b>13.5%</b> | <b>99%</b>                             |                                               |
| <b>AGGREGATED INFRASTRUCTURE</b>         |       | <b>28,882</b>                  | <b>90.4%</b> | <b>85%</b>                             |                                               |
| Bridges                                  |       | 1,613                          | 5.0%         | N/A                                    |                                               |
| Historical Collections/Heritage Exhibits | 4     | 492                            | 1.5%         | N/A                                    |                                               |
| Other                                    | 5     | 976                            | 3.1%         | N/A                                    |                                               |
| <b>TOTAL-OWNED INFRASTRUCTURE</b>        |       | <b>31,963</b>                  | <b>100%</b>  |                                        |                                               |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.

2. Replacement value is based on an average cost of \$1650/m<sup>2</sup>.

3. Most heritage buildings are acceptable, the lower rating reflects the large number of buildings at the undeveloped Turner Valley Gas Plant and Bitumont sites. These buildings were reassessed and devalued in 2002-03.

4. Based on market value.

5. Includes buildings under 1000 m<sup>2</sup> (\$536 million), Natural Heritage Sites (Parks) ( \$381 million), Other Roads (\$15 million), and Lands and Forests Infrastructure (\$44 million).

Table 8  
Functional Adequacy –  
SUPPORTED INFRASTRUCTURE 2002-03 <sup>1</sup>

| Category of Infrastructure    | Notes | Replacement Value (\$Millions) | 2002-03 % Providing Acceptable Service | 2003-04 Target % Providing Acceptable Service |
|-------------------------------|-------|--------------------------------|----------------------------------------|-----------------------------------------------|
| <b>Buildings</b>              |       |                                |                                        |                                               |
| Schools                       | 2     | 9,000                          | N/A                                    |                                               |
| Post Secondary Institutions   | 2     | 5,400                          | N/A                                    |                                               |
| Health Facilities             | 2     | 6,250                          | N/A                                    |                                               |
| <b>Total Buildings</b>        |       | <b>20,650</b>                  |                                        |                                               |
| Water Management (Irrigation) |       | 2,000                          | N/A                                    |                                               |
| Municipal Infrastructure      |       | N/A                            | N/A                                    |                                               |
| Designated Heritage Buildings | 2,3   | N/A                            | N/A                                    |                                               |
| Social Housing                | 3,4   | N/A                            | 99%                                    |                                               |

1. Backup data varies by ministry. Some is audited 2001-02 results, some has been updated in 2002-03.

2. These measures are under development.

3. Replacement value is not available as insurance is the responsibility of the property owner.

4. Measure is based on number of units rather than replacement value.

## **STRATEGY 3**

# **PROJECT PRIORITIZATION**

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## STRATEGY 3 – PROJECT PRIORITIZATION

### 4.1 Purpose

The strategy for project prioritization was to:

*Develop and assess priority-ranking systems for government capital projects.*

Following are the specific strategies for 2002-03:

- *Working with several ministries and the CCO Task Group, develop and assess a system for establishing priorities for proposed major capital projects across infrastructure types by August 31, 2002.*
- *Provide a recommendation on the feasibility and scope of application of the proposed system, by March 31, 2003.*

### 4.2 Rating System Guide

The revised Rating System Guide developed by the Task Group is summarized here. The maximum project rating score is 100.

Departments are responsible for pre-screening projects before they are rated, to confirm their need, scope and cost, to confirm the ability to implement the projects, and to confirm that they are a high priority for the Department.

#### PROGRAM DELIVERY AND HEALTH AND SAFETY – UP TO 76 POINTS

Program Delivery and Health and Safety factors represent 76% of the maximum rating score.

The Program Delivery category assesses condition, utilization and functionality restraints on program delivery outputs according to *optimal* and *basic* program delivery standards established by the program departments. It considers how seriously these standards will be compromised if the project does not proceed.

The rating system assumes all government programs (schools, hospitals, museums, etc.) are of equal priority and gives equal weight to all programs. Program Delivery is rated according to the intrinsic requirements of each program.

**- Up to 72 points**

Where projects address health and safety hazards caused by the infrastructure itself, the system provides for increased points under the Health and Safety category.

**- Up to 4 additional points**

#### ECONOMIC FACTORS – UP TO 24 POINTS

Three factors provide additional points based on economic considerations, representing 24% of the maximum potential rating score.

The Economic Benefit Factor is based on four key objectives of the Province's February 2000 economic strategy, "*Get Ready Alberta: Strengthening the Alberta Advantage*" - Innovation, Learning, Competitiveness and Quality of Life. - **Up to 12 additional points**

The Cost Avoidance and Savings factor awards points to projects that will result in future savings to the province or provincially funded agencies such as RHAs or school boards, based on program delivery or facility operation and maintenance costs that will be saved if the project is implemented. - **Up to 8 additional points**

The Value and Cost Effectiveness factor awards points where the capital cost funding commitment is less than indicated by Provincial guidelines, usually because of funding from others (P3 arrangements, fund raising, other governments, etc.). - **Up to 4 additional points**

**Maximum Score**

**100 points**

### **4.3 Decision Process**

#### **Recommended Funding to Maintain Existing Facilities**

The level of increased funding required to maintain the existing structures, facilities, roadways, etc. for their current use was determined based on the recommendations of the departments responsible for heritage buildings, parks, government accommodations, health facilities, post-secondary facilities, schools, highways, water management infrastructure, and subsidized housing accommodations. These funds would be used for smaller projects to replace infrastructure components at the end of their useful service life, to maintain and extend the service life of facilities, and to address health and safety issues. For some of the programs, expenditures against these funds would include smaller projects responding to changed operational program needs.

#### **Group of Higher Priority Projects**

The Task Group does not consider the prioritization system to be appropriate for listing projects in the specific order in which they should be approved. Rather, the prioritization system is considered a useful tool for identifying higher priority projects for further consideration by decision makers.

#### **The Prioritization System Treats All Government Programs as Having Equal Priority**

The preponderance of points, a potential 72 points out of 100, are awarded in the Program Delivery section. The rating system assumes that all Alberta Government programs associated with infrastructure (schools, hospitals, museums, research facilities, highways, etc.) are of equal priority. Departments have determined the Program Delivery ratings for their projects according to their own program requirements.

The Health and Safety and Economic rating factors are independent of the programs and are comparable across the different programs.

#### **Due Diligence and Confirmation of Project Rationale and Priority**

The need for each project and the rationale for the ratings for each project are set out in a Project Details and Rating Recommendation Sheet. Rating points were awarded for:

- high program need;
- financial contributions from non-provincial government funding sources which are expected but have not been confirmed;
- forecast savings and cost avoidance due to the projects.

It is expected that Treasury Board would require confirmation of these factors from Ministers, and in some cases a complete business case analysis, before providing funding for projects to proceed.

#### **4.4 Comments on the Rating System**

This report accomplishes the targets of Goal #3 of the CPI 2002-03 Strategies and Targets. The prioritization system for expansion projects and major preservation projects has been tested and refined and is considered appropriate for determining and designating the higher priority projects for the consideration of decision makers. The system has been used to rank the projects proposed by Departments, generally consistent with the Departments CCO submissions.

The work of the Task Group and this report support recommendations of the Financial Management Commission Report on the documentation of operating costs for proposed projects (recommendation 9), the development of a plan to deal with deferred maintenance (recommendations 10 and 11) and developing criteria for setting priorities and making budget decisions (recommendation 13).

The Task Group considers that the participation of all affected departments is very valuable and is essential in ranking cross government capital investment needs.

There is a consensus of support from the Task Group members that the result of its work fairly represents:

- the annual funding needs to maintain the existing infrastructure for its current uses
- the higher priority needs of the departments for capital investment, primarily larger projects.

The Task Group has not addressed the funding needs or funding mechanisms for the lesser priority and mid-sized projects that fall between the two needs identified above.

#### 4.5 Recommendations for the 2003-04 CPI Strategies and Goals

- **Development of Program Department Criteria for Basic and Optimal Program Delivery Outputs**

In the rating system, Program Delivery rating points are based on the extent to which the quality and quantity of program outputs are negatively impacted by condition, utilization and functionality factors. The impact of these factors is considered in relation to *basic* and *optimal* program outputs. *Basic* outputs represent the lowest program outputs that the program department considers can be tolerated. *Optimal* outputs represent the program service delivery requirements that the department would be specify for a new project.

The rating system will be strengthened if program departments define and document rating scale criteria for *basic* program outputs and *optimal* program outputs.

- **Alternative Approaches to Cross-Government Prioritization of Projects**

The Task Group considers that the participation of all affected departments is very valuable for ranking capital investment needs. The prioritization system and process is considered appropriate for identifying higher priority Expansion and Major Preservation projects for further consideration by decision makers.

If a system is required to identify the specific priority order in which Expansion and Major Preservation projects should be approved, an independent and/or cross-government group will be needed to review and decide on the priority of Expansion and Major Preservation projects, based on initial assessments and detailed presentations from Departments.

- **Business Case Analysis**

The use of more complete and rigorous business case analysis, particularly for larger projects, would strengthen the prioritization of capital investment needs.

**STRATEGY 4**

**ALTERNATE SERVICE  
DELIVERY**

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## STRATEGY 4 – ALTERNATE SERVICE DELIVERY

### 5.1 Purpose

The overall strategy for Alternate Service Delivery is to

*'Ensure effective, innovative delivery of physical infrastructure.'*

Specific targets for 2002-03 are:

- Review the impact on P3 Guidelines of the government response to the Financial Management Commission.
- Present P3 Guidelines for approval to the Deputy Minister's Committee by December 31, 2002.
- Report on ASD initiatives undertaken in 2002-03.

### 5.2 P3 Guidelines

The P3 Guidelines were further refined and are undergoing final review.

### 5.3 ASD Initiatives

Ministries were canvassed as to ASD and P3 initiatives undertaken in 2002-03 and the success of those initiatives. A description of various initiatives are described on the following pages.

#### 5.3.1 Health Authority Long-Term Care Projects

##### Background

Historically, Infrastructure has provided 100% of the funding for the new long-term care facilities through capital grants to health regions. The traditional methodology of project delivery was used to develop these projects.

In 1999-2000, the P3 model of project delivery emerged as a more cost-effective means of meeting the need for long-term care facility expansion and rejuvenation. With this model, Regional Health Authorities (RHAs) conduct open, fair and transparent competitive processes under which private and voluntary sector organizations submit proposals to develop and operate new facilities.

Funding was approved in 1999-2000 that has resulted in the very cost-effective development of facilities through this new model - at Calgary, Edmonton, Red Deer, Sylvan Lake, Rocky Mountain House, Evansburg, Hinton, and Medicine Hat.

Additional funding was approved in 2000/2001 for further P3 long-term care projects in Calgary and Edmonton. The RFP processes and selection of partner organizations has been completed for the Edmonton projects.

**Purpose/Objectives in Pursuing Alternative Delivery Arrangements**

*The Healthy Aging: New Directions for Care* (Broda) report documented a need:

- for additional long-term care bed capacity in Alberta;
- to rejuvenate existing older long-term care facilities; and
- for additional supportive housing projects to house seniors that need health care assistance but do not require the full scope of health services provided in long-term care facilities.

The Calgary Health Region (CHR) asked government to support the region taking the initiative to develop and test a request for proposal process to determine whether the P3 approach would result in more cost-effective development of needed new facilities. In conjunction with this initiative, Infrastructure, Health and Wellness and Finance developed guidelines for the P3 process.

The P3 process developed with the RHAs has created the opportunity for the partner organizations to develop aging-in-place communities (that include other types of seniors' accommodation, such as supportive housing, with the long-term care facilities supported by the RHAs).

**Alternative Arrangements for the Delivery of the Projects or Service**

The P3 model for these projects is a contractual relationship between an RHA and a private, voluntary or public sector partner to develop long-term care infrastructure. Under these arrangements, the partners design, build, finance, own, and maintain the facilities and provide long-term care services to the RHAs for 30 years.

**Extent to which Purpose / Objectives were achieved (Were these quantified and documented?)**

The RFP processes and the development and signing of contracts have been completed relative to all of the funding approved in 1999-2000, and part of the 2000-01 funding for the Capital Health Authority (Edmonton). With the exception of one facility that burned down during construction and is being rebuilt, the facilities in Calgary, Edmonton, Hinton, Evansburg, and Rocky Mountain House have been constructed and are in use. The other projects are in various stages of construction.

The expected financial benefits to the province have been realized. The capital investment required per-bed from the government/RHAs for the projects is less than one-half of the funding required for traditional projects in past years.

Most of the projects have been developed in conjunction with supportive housing and seniors' housing that has been financed by the partner organizations or by the partner organizations with the assistance of grants from Alberta Seniors. The supportive housing components contribute to the cost effective delivery of health care services by the RHAs, because they accommodate people that otherwise would have to be served at greater cost in long-term care facilities.

Infrastructure has completed a study of a representative project developed under the P3 process with a representative project previously developed under the traditional methods. This study, done under the auspices of a steering committee with Health and Wellness and RHA representation, concluded that:

- The P3 facility will serve the residents well for the planned service life of the facility, built to different standard and at lesser costs than the facility built under the traditional model.
- The P3 model permits the Health Authority to secure more long-term care beds than it would be able to secure for the same level of capital funding under the traditional model.
- Under the partnering arrangement the partner is able to enter into a long-term business opportunity which is stable and predictable, where it can leverage its equity to build and operate long-term care facilities, capture economies of scale and facilitate a service delivery model which offers a full range of options that permit aging in place.

**Table 9**  
**Costs to the Province for the P3 Projects Compared with Past Projects**

| Project                                                                       | No. of Beds | Historical Guideline Costs | P3 Projects Costs | Provincial Contribution to P3 Projects |
|-------------------------------------------------------------------------------|-------------|----------------------------|-------------------|----------------------------------------|
| Calgary Health Region<br>- 4 projects                                         | 468         | \$ 72,633,600              | Not available     | \$33,200,000                           |
| Capital Health Authority<br>- 6 projects                                      | 611         | 94,827,200                 | 85,523,623        | 37,475,680                             |
| WestView Regional Health Authority<br>- Evansburg and Hinton                  | 65          | 12,142,000                 | 7,744,266         | 7,744,266                              |
| David Thompson Health Region<br>- Red Deer, Rocky Mountain House, Sylvan Lake | 190         | 32,114,000                 | 26,146,200        | 21,100,000                             |
|                                                                               | 1,334       | \$211,716,800              |                   | \$99,519,946                           |

**What Sharing of the Risks and Rewards were there with the Private / Non-Profit Sector?**

Under the P3 arrangements, the partners design, build, finance, own, and maintain the facilities and provide long-term care services to the RHAs for 30 years. The project designs are subject to RHA review. The operational service requirements (accommodation and health care) are the same as for all other long-term care service providers in the health region.

P3 Guidelines have been established by the Government to ensure process and due diligence requirements are followed, including the following:

- The health regions conduct request-for-proposal processes to find the best private or voluntary sector proposals for the use of government funds.
- In the selection process, health regions review project funding plans, pro-forma cash flow projections and statements of revenue and expenditures provided by the proponents to obtain confidence in the economic viability of the project and that the health care levels provided by the operating partner will be maintained and will continue in the future.
- The partners are responsible for the life cycle costs of the facilities and are required to contribute to a reserve account for capital renewal of the facilities.
- Detailed negotiations with the operator/developer partners take place at the beginning of the process to develop contracts for the construction and subsequent operation of the new facilities.
- The financial model and the contracts used for these projects are negotiated to minimize the risk of default by the partner.

**What Financial Contribution did the Private / Non-Profit Sector Make?**

Table 9 illustrates the project costs and the provincial contribution to the projects. The balance of the funding was provided by the partner organizations, ranging from 56% of the cost of the project in Edmonton, 19% of the projects in the David Thompson region, and 0% of the projects in the WestView region. The WestView projects were still cost-advantageous for the province because the projects were delivered for less than they would have cost according to Infrastructure's historical cost guidelines. The historical cost guidelines are based on Infrastructure's database on the cost of past projects.

Most of the projects were developed in conjunction with seniors' housing and/or supportive housing facilities, providing a complex of facilities based on an aging-in-place concept. The development partners funded these other facilities, and not by Infrastructure. In some cases, Healthy Aging Partnership Initiative grants provided by Alberta Seniors provided partial funding for the supportive housing.

**Lessons learned (What worked, what would you do differently?)**

This initiative was led by the Calgary Health Region with strong follow-up development by the Capital Health Authority, all done with regular communication and review by Infrastructure and Health and Wellness. The initiative was managed with adequate and strong resources in the development of the processes and required documentation and the management of the processes. The processes were used successfully this past year on the second round of projects for the Capital Health Authority.

**Contact:** Alberta Infrastructure, Capital Projects Division  
John Bennett, Executive Director  
Health Facility Projects Branch  
(780) 422-7531

**5.3.2 Calgary Court Centre Public-Private Partnership**

**Background**

In June 2002, the Government of Alberta began the process of soliciting proposals for building a new consolidated justice facility for Calgary as a public-private partnership. Each step has gone well with strong and competitive private sector interest, through the first call for Expressions Of Interest, through the Request For Qualifications that followed, and now as Alberta Infrastructure works with the three qualified respondent teams.

At this time we are in the midst of the Request for Proposal (RFP) stage.

**Purpose/Objective in Pursuing Alternative Delivery Arrangements**

The idea behind this strategy is to pursue a new central court facility quickly, and would enable government to address the pressing need for adequate court facilities while still addressing other infrastructure pressures throughout the province. In other words, this delivery arrangement can spread the payments of the asset over the economic life of the facility, avoiding high initial cash outlay.

**Alternative arrangements for the delivery of the Project or Service**

The Government of Alberta is pursuing a Public/Private Partnership as a potential method of project delivery under a long-term lease arrangement.

Under this model, the successful respondent will undertake the development, design, construction, financing, ownership and property management of a consolidated law courts facility in Calgary.

**What Sharing of the Risks and Rewards were there with the Private Sector?**

In general in this arrangement the government intends to share and transfer the following major risks and rewards:

- Lower lease rates
- Lower upfront investment
- Project may be built sooner rather than later, lowering overall cost to government, and giving Albertans earlier access to facilities
- Sharing operating efficiencies
- Reduction or elimination of the financial risk of owning and maintaining the building

The department along with the strategic planning team have developed a risk register that now identifies over 200 potential areas of risk transfer that will be evaluated when proposals are submitted.

**What Financial contributions will the Private Sector make?**

The Private sector will be contributing all of the initial up front capital cost for construction, maintenance, and cyclical renewals for this project for the entire term of this project, and will be able to generate income once the facility is built.

**Extent to which Purpose/Objectives will be achieved?**

Alberta Infrastructure expects to receive a building based on up to 1.1 million square feet plus 200 secure and 200 non-secure parking stalls. This high quality, Class AA structure will be built to accommodate a 12 year projected expansion to meet program needs, with additional shell space that allows for up to 25 years of growth.

**Lessons Learned (What worked, what would you do differently?)**

The ministry has found it extremely important to involve the users for all the development stages thus far. Stakeholder understanding and support for a project of this size is needed to allow it to go forward smoothly and with expedience.

A tremendous amount of work is required up front to document the RFQ/RFP's properly. There is a limited pool of resources in the market to compete on projects of this magnitude and nature.

From the RFP stage, we have learned that the Expression of Interest (EOI) stage, used on this project, provided much more benefit than originally expected. We have found that teams interested in this project took it upon themselves to develop and initiate their plans to compete long before formal RFQ/RFP documents were sent out.

**5.3.3 Alberta Seniors – Seniors Supportive Housing Incentive Program/Healthy Aging Partnership Initiative**

**Background**

From 1959 to 1993 the government funded the construction of senior citizens' homes. In 1994, however, the government decided they would no longer be involved in building new housing facilities.

**Purpose/Objectives in Pursuing Alternative Delivery Arrangements**

The *Healthy Aging: New Directions for Care* (Broda) Report documented a need for additional supportive housing projects to house seniors who are living longer, wish to age in place and do not require the services of a long term care facility.

**Alternative Arrangements for the Delivery of the Projects or Service**

The Healthy Aging Partnership Initiative (HAPI) and Seniors Supportive Housing Incentive Program (SSHIP) provided one-time capital grants for eligible capital costs to assist management bodies and private non-profit housing organizations to fund new supportive housing projects or modify existing projects to accommodate aging in place for low and moderate-income seniors.

**What Sharing of the Risks and Rewards were there with the Private Non-profit Sector?**

The private non-profit sector took on the responsibility of ownership of the projects identifying the needs in their community and raising the funds for the cost of construction. In some cases, the non-profit organization even financed funds to complete the project, which compounded the risks.

**What Financial Contribution did the Private Non-profit Sector Make?**

Some private non-profit organizations have funded 100 per cent of the capital costs of new housing units. However, with the assistance of the SSHIP and HAPI programs, private non-profit organizations have been able to reduce the amount of required borrowing, making the units more affordable to low-income seniors. SSHIP and HAPI have provided \$51.7 million to assist in increasing the supply of supportive housing. These programs helped leverage over an additional \$112 million in external funding.

**Extent to which Purpose/Objectives were Achieved (Were these quantified and documented?)**

Through both programs over 1,600 new, low cost supportive housing units are being developed, which will be owned and operated by non-profit organizations.

The department is developing a tracking system that will, in addition to a number of administrative elements:

- ❑ Track other information necessary to conduct an evaluation of the programs to ensure that they accomplish the purpose for which they are intended, and
- ❑ Track financial and client wellness information to study the impact these projects have on the lodge and long term care systems.

**Lessons Learned (What worked, what would you do differently?)**

When it comes to providing suitable accommodation for seniors, it is recognized that housing and health are strongly linked. These two programs were extremely important in communicating the importance and need for supportive housing with the housing providers. It also has been instrumental in encouraging and forming excellent partnerships between regional health authorities and housing providers. As a result, seniors will have more housing options available, be able to age in place and benefit from the provision of services when they need them.

**Contact:** Alberta Seniors, Housing Services Division  
Robin Wigston, Associate Director  
Major Housing Initiatives and Program Delivery Branch  
(780) 427-4093

**5.3.4 Anthony Henday Drive – Accepting Fill Dirt From Off Site**

**Background**

A developer in Edmonton was working adjacent to a section of Anthony Henday Drive (AHD) that will not be built in the immediate future.

He had an excess of 80,000 cubic meters.

**Purpose/Objectives in pursuing Alternative Delivery arrangements**

Cost management

**Alternative arrangements for the delivery of the Project or Service**

The developer was allowed to place his excess material within the footprint of AHD. He stripped the site and hauled and placed material.

The department compacted the dirt.

**What sharing of risks and rewards were there with the private sector**

This was a low risk opportunity for Alberta Transportation (AT). The department would otherwise have had to borrow this material.

The department saved about \$120,000 by reducing future borrowing needs.

The developer saved an unknown amount by not having to truck haul his material away from his own site.

**What financial contributions did the Private Sector make?**

Effectively each Private partner contributed \$120,000 to the Province.

**Extent to which purpose/objectives were achieved (Were these quantified and documented?)**

Each partner achieved cost savings.

**Lessons Learned**

Lessons learned:

- Be knowledgeable of development opportunities.
- Try to share the work rather than look for cash contributions.

What worked?

- Savings of \$120,000 were realized.

**Contact:** Transportation & Civil Engineering Division  
Les Hempsey, Project Director, North/South Trade Corridor  
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### **5.3.5 Cost Sharing of Drainage Outfalls on Anthony Henday Drive**

**Background**

In Edmonton, each developer of land is responsible for limiting the outflow of surface water run-off to rates prior to development. Construction of Anthony Henday Drive (AHD) is considered a "development."

On AHD the department needed to construct retention ponds and outfalls to Blackmud Creek and to Whitemud Creek respectively. Estimated cost of each system was \$1 million.

Two separate developers also needed to build retention ponds and outfalls, one to each creek. Their estimated costs were also about \$1 million each.

**Purpose/Objectives in pursuing Alternative Delivery Arrangements**

Cost management

**Alternative arrangements for the delivery of the Project or Service**

By combining and upsizing one pond and outfall to each creek, the cost of each system was \$1.3 million.

The department constructed and paid for half the system at each location.  
Each developer constructed and paid for half the system at each location.

**What sharing of risks and rewards were there with the private sector**

This was a low risk opportunity for Alberta Transportation. The terms of the contract were agreed and signed off prior to construction by the department.

Each party to the contract saved approximately \$350,000 per system. The department saved \$700,000 since it was involved in two systems.

**What financial contributions did the private sector make?**

Effectively each private partner contributed \$350,000 to the province.

**Extent to which purpose/objective was achieved (were these quantified and documented?)**

Each partner achieved its drainage objectives at a cost reduction of \$350,000 per system.

The environmental gain was that there was less disturbance to each creek related to construction.

Other developers can also tie in to these systems since they are limited to their pre-construction drainage rates. This eliminates further construction activity in the creeks.

**Lessons Learned**

Lessons learned:

- Be knowledgeable of development opportunities.
- Try to share the work rather than look for cash contributions.

What worked?

- Considerable savings of 35% were realized on each drainage system.

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